



TWO THIRTY HORSE POWER TRACTORS EACH PULLING FIVE HARVESTERS IN A GREAT WHEATFIELD

that quieted the cry for the free coinage of silver and pulled us out of the financial mud. Farmers did not want payment for a big crop in a depreciated currency that would command only half values in a world market.

It was a big wheat crop that took the glitter out of that phrase about crucifying mankind on a cross of gold. And in 1915-16, when we were just getting into our war stride, it was another good wheat crop with high prices that put the West on the high road to the greatest prosperity we have ever known.

Ordinarily Europe requires 500,000,000 bushels of wheat from outside sources. What she will require in this year of the war no one can say; for no one can possibly guess how short European crops will be owing to the war or how much more she will require owing to the war.

Formerly Great Britain required 250,000,000 bushels a year, raised 50,000,000 and imported 200,000,000 bushels. Germany required 200,000,000 bushels, raised 125,000,000 and imported 75,000,000. Austria imported 50,000,000, Belgium 50,000,000, Italy 40,000,000.

#### Countries That Have a Surplus.

Of the countries with a surplus Canada could be depended on for over 100,000,000 bushels in good years, Argentina for from 40,000,000 to 100,000,000, India and Australia for from 100,000,000 to 200,000,000 bushels and Russia and Rumania for from 100,000,000 to 150,000,000 bushels; and this country for 100,000,000 bushels more or less.

Russia and Rumania may be written off this year's map. So may India and Australia unless Japan can supply the tonnage to carry the wheat. So may Argentina unless we supply the tonnage to carry the wheat.

Now Canada and the United States, if you dig facts and repetitions out of totals, never in all their history have exported as much as 500,000,000 bushels. The nearest they approached it was in the season of 1914-1915, when the United States sent out 332,000,000 bushels, including flour. Canada's exports for 1914 in wheat and flour were placed at 232,000,000 bushels; but a large proportion of Canada's wheat exports were included in the United States flour exports; so that these figures cover the same ground.

Can Canada and the United States supply the needed 500,000,000 bushels, perhaps more? Figure for yourself!

Count five bushels per head for home consumption—500,000,000 bushels for the United States and 35,000,000 bushels for Canada. Count two bushels for seed. This is a little more than is actually used in the West, but no count is being made of waste in cleaning and shelling. This requires 150,000,000 more bushels. In all this country will need 685,000,000 bushels.

Canada has promise of a crop of 300,000,000 bushels, this country of at least 900,000,000. We can spare 500,000,000 bushels, we can spare that and more if—and there we, too, sweat with the agony of the gambler in the Wheat Belt—we can feed Europe out of our superabundance this year if—if the stealthy presence of the frost does not creep into our fields when the mercury begins to drop in early August.

Another much discussed and very much

cussed point is our low averages in America. We do not average thirty bushels to the acre as Germany and France do; but Germany and France average those high averages from the intensive cultivation of small areas by cheap labor.

We are machine producers. We average lower from 20 to 14 bushels per acre, but we aggregate higher. We produce the most wheat per man power of any country in the world. France and Germany produce the most per acre and the least per man power.

As long as our aggregate feeds the most humans, I don't purpose joining the howl of woe over our low averages. Better low averages and many acres and high aggregates than high averages and few acres and low aggregates. We fill the ships and the hungry stomachs and that's what wheat is for, more than records. In fact, record wheat plots are like the record cow. They cost more to produce than they return in cash.

Grain can only be sent to Europe as the tonnage is free to carry it and as the buyers are free to take it. Grain bought on an open market and conveyed to Spain in ships independent of Government control could be stored where it could be fed out to a hungry world at exorbitant prices. This the Government storage system effectually prevents.

There is more romance in the wheat crop than the gambler's chance of wealth by one stroke of fortune. There is romance in the history of each species of wheat.

#### Sterling Seed Had by Chance.

Red Fife, the staple of the great spring wheat belt to-day, sprang from a chance shipment of a few pounds from Scotland to a poor backwoods farmer in Ontario. It had come originally from Russia via Hamburg dealers.

The legend runs that it came so very late in the old ocean sailing packets that it could not be planted in time. It came as a fall wheat. Whether the farmer planted it too late in the fall or too late in the spring, or whether his patch of clearing in the midst of a shadowy forest did not let enough sunlight in, only two or three heads came through ripe that season; but they had such a wonderful full round berry that the eager farmer and his wife treasured them up like grains of gold.

One can see the poor ragged couple with deep disappointment in their eyes turning over the precious grains in the palms of their hands; but could any prophet foresee or foretell that those precious grains would be the foundation for the wheat that was to provide three-quarters of the crop to feed a starving world and defeat Germany?

Talk of romance! Can any romance beat that? For the farmer planted this fall wheat as a spring wheat, and reaped enough to give him seed for his whole plot the third year; and from the foundation of this fall wheat changed into a spring wheat developed such famous varieties as Hayes' Minnesota and Saunders' Marquis.

Similar cases are on record of taking a soft fall wheat from Kansas or California, planting it on Peace River in the North and changing it to a hard spring wheat in a few seasons. It hardly needs telling that it is the alchemy of the long

daylight in the North which works the miracle.

Could science beat the weather? The scientist walked through as fine a field of Red Fife as could be found. Amid the ripening crop yellow as gold maturing in the sunlight stood out two or three colossal high full spikes ripe earlier than the rest of the field. The scientist carefully clipped and kept these early ripening heads.

These he planted in a specially prepared plot the next season. He did more. He got some early ripening varieties of, perhaps, not as fine a berry from Siberia. Waiting till the wheat flowerette bloomed—the flowerette opens just at day dawn to the rising sun, when an elusive odor known to all wheat lovers pervades the prairie ozone—he crossbred the flowerette from Siberia or some other northern field with the flowerette from the early ripening heads of the Fife; and while the resulting seeds might vary in cases, Mendel's law ruled true: some especially early fine stalks and heads resulted from the union.

#### Crossbred Again and Again.

These in turn were seeded and again crossbred for fullness of head and early maturity. So the spring wheat varieties to beat the frost have been developed from the foundation of the few heads saved from the farmer's backwoods lot.

Every year the scientists are lopping a few hours or days off the time to mature; and the time may come when a variety will be developed to extend the wheat belt as far north as Athabasca or Alaska.

One of the finest varieties ever developed came from another poor Scandinavian settler's farm in western Canada. It has come to be known as the Marquis and commands from \$5 to \$10 a bushel as a flawless seed wheat.

This man had especially good land. He had an especially sunny locality. Year after year he had quietly and laboriously been preparing a seed bed fine and mellow as silt.

One year a prize of \$1,000 was offered for the best wheat exhibited in the Northwest; and the poor settler awakened to find himself both rich and famous. He had developed by purely good culture a self-selective new variety of wheat now known as the Marquis. I tried this wheat on my own Down East farm. We chanced to have a dry, sunny summer, very bad for other crops but suitable for this wheat; and we reaped a crop of beauty. The next year it was rainy and cloudy, and the hard wheat degenerated to scrub.

As romantic a story attaches to the Durum wheats to resist rust and drought. These developed from crosses between Nicaraguan and Russian wheats.

A few days ago the press announced the death in China by accident on a river steamer of Frank Meyers, an American agricultural explorer. This man and men like him searched every nook and cranny of the agricultural earth for such strains of cereals and fruits and trees as will beat the frost and defeat the desert.

How many people paused to think as they read the item that this man was as much a soldier of the Food War dying in a front line trench as any man who ever won the Victoria Cross? It is through the work of our army of nameless heroes

like Meyers—though he once called me down for describing him as a hero—that wheat is to-day beating both drought and frost, claiming mile by mile a little more of the reclaimed arid lands each year, stretching mile by mile a little farther into the realm of King Frost.

One effective agricultural explorer is worth a million Kaisers to the good of the race; and the humble backwoods settler who saved his Red Fife heads and the poor Scandinavian settler who developed the Marquis wheat were as much explorers as the hero who died in China.

To the public at large the big spectacular moment of the wheat, the agony act of the play, if you like to call it that, is the harvest. Excursion trains run harvest hands in thousands to the yellow fields. The men live in tents with chuck wagons and cook like armies, which has relieved the fearful stress that used to fall on the wheat farmer's wife at this time.

Self binders eliek and hum like the wings of an airplane from dawn till dark. Some are drawn by two horses. Some are drawn by forty horses. Some thresh and bag the grain as they cut.

The wheat harvesters work like fevered sappers in an army. No private granary on earth could house the crop of these great grain fields. Sometimes it is stacked mountain high unbagged and covered with canvas. Sometimes it is bagged and piled in rows like a cement block building; but again the wheat farmers must beat the weather before autumn rains. So mile long processions of wagons, wagons hauled by teams, wagons hauled by tractors, set out across the prairie for the elevators. Right here nail and refute the foolish self-evident lie of farmers "hoarding" wheat! They couldn't except in quantities of a few thousand bushels.

#### Wheat as a Real Drama of Life.

To me, the long lines of wheat wagons winding across the prairie are the drop curtain act of the wheat drama. You see them coming through the slant rays of the rising sun over the autumn mellowed, nutty odored prairie like the caravans of pilgrims to some shrine, the temple of the year's plenty, the tall gaunt elevators.

You see the empty wagons going back at night against the rays of the blood red exaggerated sun sinking in seas of splendor. The faces in the wagons are harvest moons of thanksgiving satisfaction. What the faces are saying is: "Well, thank God, that takes the mortgage off my neck, and there will be enough left for a new house for mother, and the kids can go to college this winter, and, say, son, this is God's good country all right, all right."

Afar in the darkening horizon countless fires flicker like searchlights. Millions and millions of tons of wheat straw are being burned because there is nothing else to do with it. I never see the blur of smoke clouds above the flickering lights that guide the wagons rattling home over the frosty roads but I think of the ancient rite of incense to the Great Good God of Plenty.

The hungry, tired drivers may utter rough oaths as they hurry the lagging teams home, but believe me, if you know the hopes and fears in the hearts below the sun bronzed faces you will recognize the roughest swear word as a prayer of thanks to God.